

clamps. The dimension achieved in Step 14 must be maintained at all times. This dimension is critical to avoid undue stress on the rubber boots during vehicle operation.

17. Refer to **Figure 30** and secure all large boot clamps. Bend down the tab (**Figure 31**) on the boot clamp and secure the tab with the locking clips and tap them with a plastic hammer. Make sure they are locked in place (**Figure 29**).

18. Install a new stopper ring (A, **Figure 3**) if it was removed. Make sure the stopper ring is seated correctly in the drive axle groove.

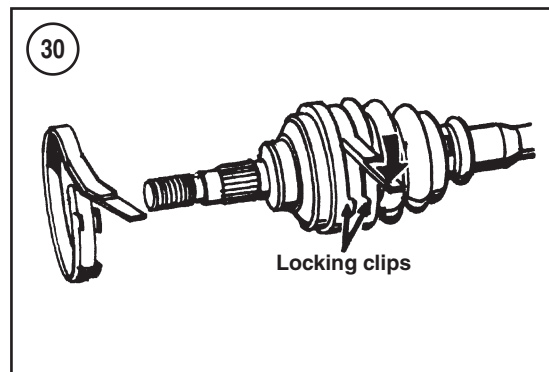
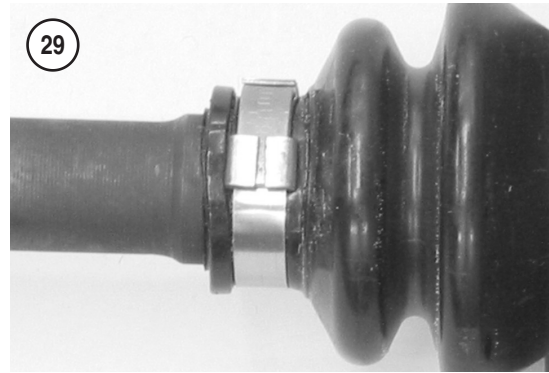
19. Apply molybdenum disulfide grease to the drive axle splines.

DRIVESHAFT

The driveshaft **Figure 32** can be removed without removing the front differential or front drive axles.

Removal

1. Support the ATV with the front wheels off the ground.
2. Remove the center mud guard and inner front fender panel on the left side of the vehicle as described in Chapter Fifteen.
3. Remove the lower front differential mounting bolt (**Figure 33**).
4. Remove the upper front differential mounting bolt (A, **Figure 34**) and spacer (B).
5. Remove the front differential front mounting bracket bolts (**Figure 35**).
6. Push the front differential forward, then push the front driveshaft forward so it disconnects from the engine output shaft (**Figure 36**).
7. Remove the front boot band (A, **Figure 37**).
8. Push the boot (B, **Figure 37**) off the differential pinion joint while pulling the driveshaft rearward and removing it.
9. Remove the driveshaft joint and spring from the driveshaft.
10. Inspect the driveshaft as described in this section.

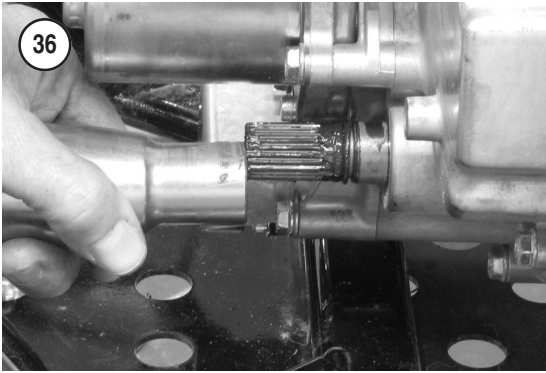
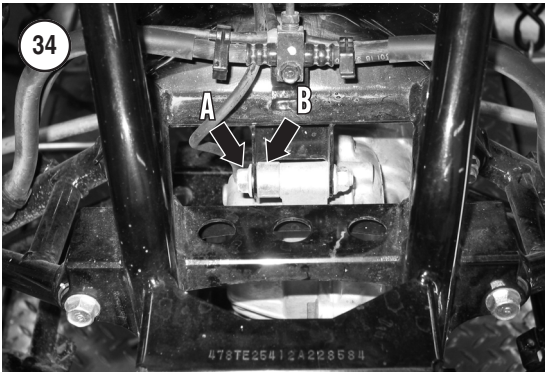
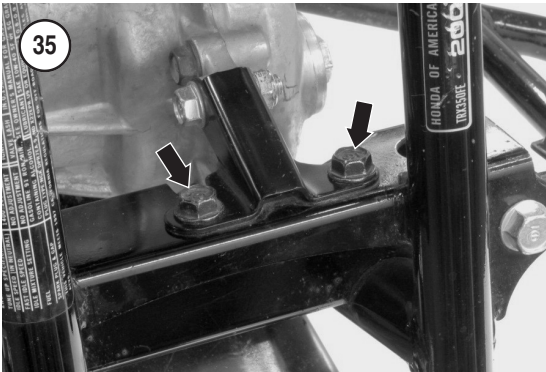
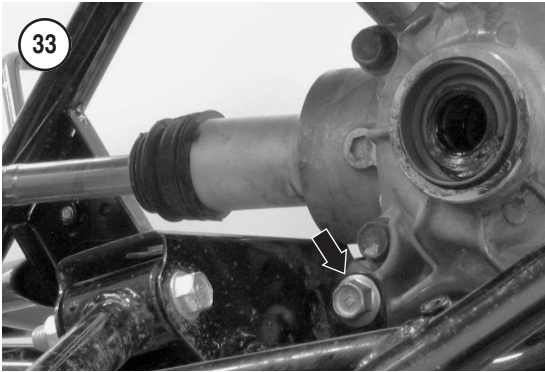
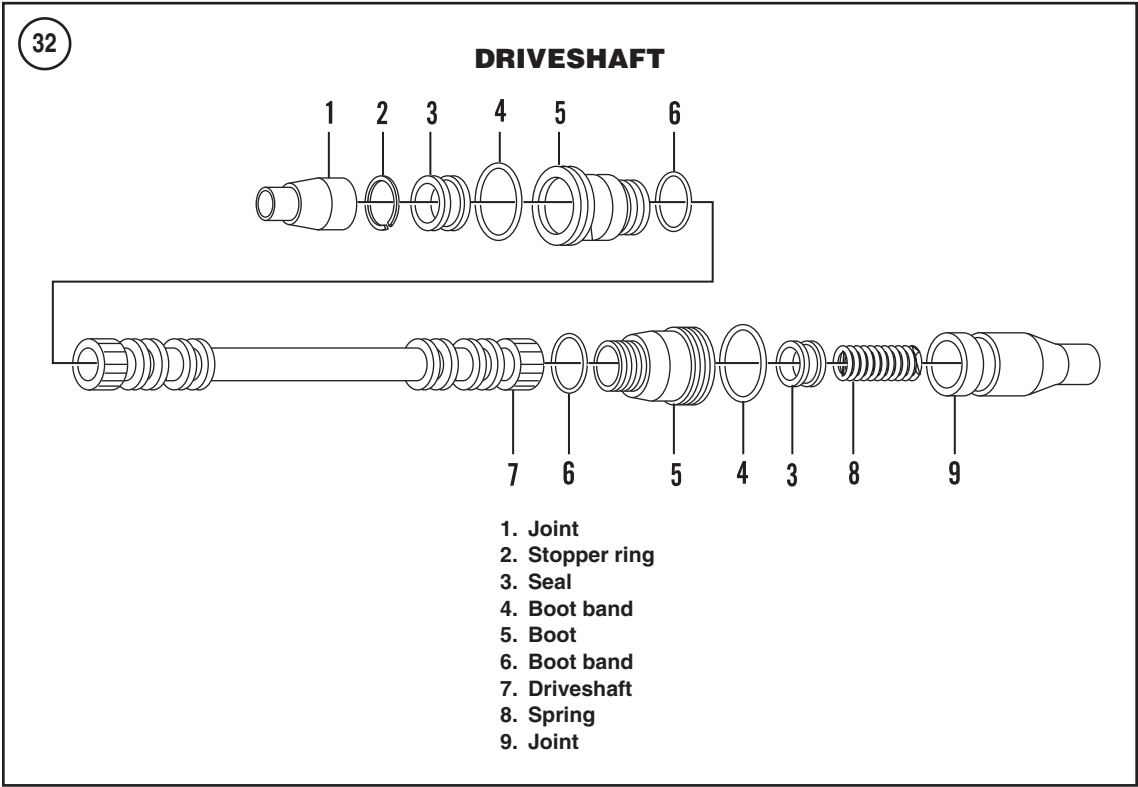


Inspection

1. Inspect the driveshaft for bending or other damage.
2. Examine the splines in each end for damage.
3. Examine the seals for excessive wear or damage. Install a new seal using the following procedure:

CAUTION

The seal is a tight fit when passing over the shaft splines. Lubricate the



splines and seal, and be careful not to cut the seal.

- a. Place a seal protector sleeve or plastic cone against the shaft end (A, **Figure 38**).
- b. Place the lubricated seal on the cone (B, **Figure 38**). The open side must be toward the shaft as shown in **Figure 38**.
- c. Push the seal onto the shaft, then work the seal into place on the seal seat as shown in **Figure 39**.

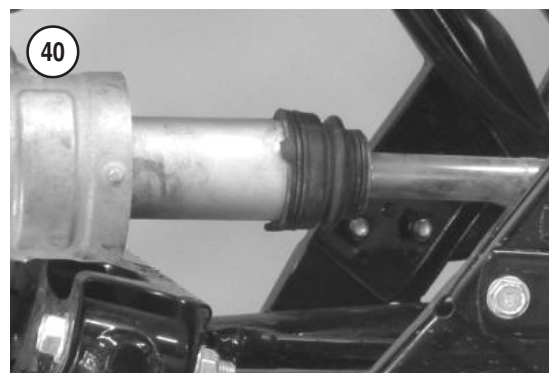
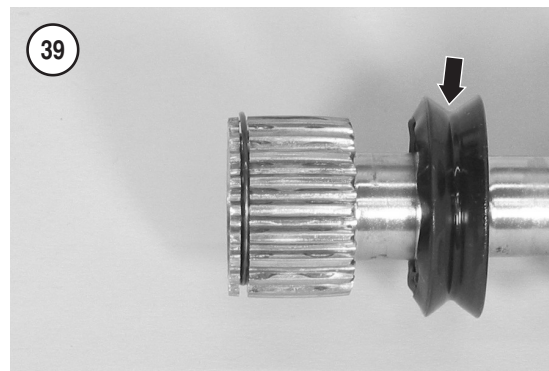
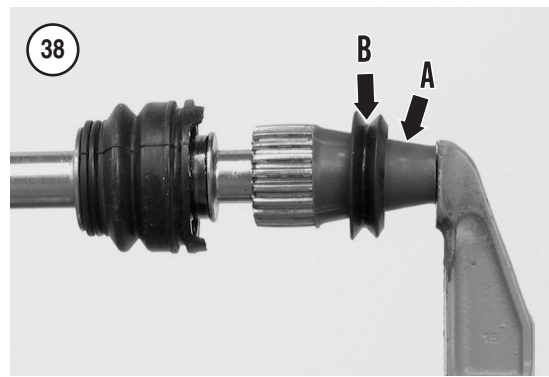
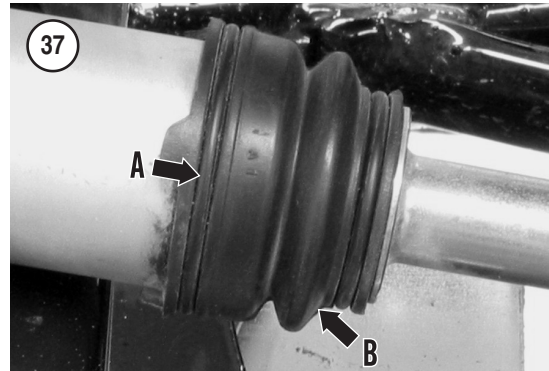
Installation

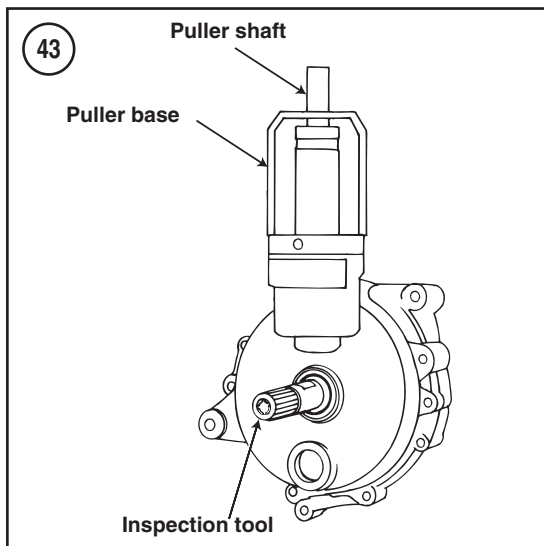
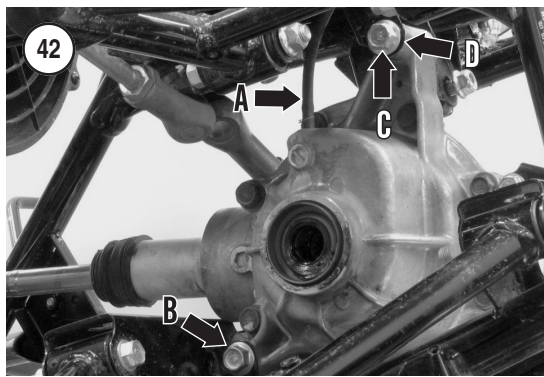
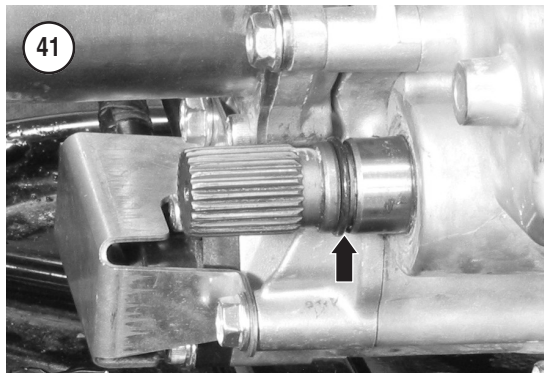
1. Lubricate the driveshaft splines and dust seals with molybdenum disulfide grease.
2. Push the front differential assembly forward in the frame.
3. Apply 5-8 g (0.18-0.28 oz.) of molybdenum disulfide grease onto the shaft splines at the differential end of the shaft.
4. Install the driveshaft into the differential pinion joint (**Figure 40**).
5. Insert a piece of wire between the driveshaft and boot to release air from the pinion joint. Leave the wire in place until Step 16.
6. Install the O-ring (**Figure 41**) onto the final driveshaft, if it was removed.
7. Apply 5-8 g (0.18-0.28 oz.) of molybdenum disulfide grease onto the rear driveshaft splines. Also apply grease to the O-ring (**Figure 41**).
8. Install the spring into the front shaft joint.
9. Install the spring and front shaft joint onto the driveshaft and under the boot.
10. Push the driveshaft forward, then connect the driveshaft to the engine (**Figure 36**). If necessary, rotate the driveshaft to align the splines.
11. Move the front differential rearward and align the mounting holes with the frame.

NOTE

Do not tighten the differential housing mounting bolts until all of the fasteners have been installed.

12. Install the two bolts and the front mounting bracket (**Figure 35**).
13. Install the upper mounting bolt, nut and spacer. Install the spacer as shown in B, **Figure 34**.
14. Install the lower mounting bolt (**Figure 33**).





15. Tighten the differential mounting bolts to the following torque specifications:

- Tighten the front differential mounting bracket bolts to 22 N•m (16 ft.-lb.).
- Tighten the lower mounting bolt to 44 N•m (33 ft.-lb.).

- Tighten the upper mounting bolt to 44 N•m (33 ft.-lb.).

16. Remove the piece of wire installed in Step 5.

17. Install the inner front fender panel and center mudguard.

FRONT DIFFERENTIAL

The front differential gearcase can be removed with one front drive axle still attached to the steering knuckle. The front driveshaft may be removed before the differential, or removed with the differential. If it is only necessary to remove the driveshaft, refer to *Driveshaft* in this chapter.

Removal

- Remove the front wheels.
- Remove the center mud guard and inner front fender panel on the left side of the vehicle as described in Chapter Fifteen.
- Remove one or both front drive axles as described in this chapter.
- Disconnect the vent hose (A, **Figure 42**) from the differential gearcase.
- Remove the lower front differential mounting bolt (B, **Figure 42**).
- Remove the upper front differential mounting bolt (C, **Figure 42**) and spacer (D).
- Remove the front differential front mounting bracket bolts (**Figure 35**).
- Push the front differential forward, then push the front driveshaft forward so it disconnects from the engine output shaft (**Figure 36**).
- If necessary, remove the front driveshaft as described in this chapter.
- Remove the front differential gearcase (**Figure 42**) from the frame.
- Remove the front mounting bracket.

Backlash Measurement/Adjustment

Perform gear backlash measurement prior to disassembly to determine gear wear and whether the internal shim thicknesses must be adjusted. Measuring gear backlash is also necessary after overhaul.

- Install the pinion puller base, puller shaft, adapter and special nut as shown in **Figure 43** so

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